

The Apple Graphics Tablet

Creative Electronics for the '80s

Accessories

The Apple Graphics Tablet turns your Apple II Personal Computer System into an artist's canvas or illustrator's drawing board by offering a medium for creating and displaying pictorial information electronically. Block diagrams, architectural renderings, logic diagrams, schematics, mechanical shapes and fine art are just a few of the applications of the Graphics Tablet. Its advanced features, combined with surprising simplicity of operation, make it an ideal tool for transforming the creative idea into visual reality.

Benefits

The Apple Graphics Tablet...

- lets you free your imagination to create detailed illustrations and other artwork, because results are displayed in Apple's high resolution graphics mode...
- can be quickly understood and operated by anyone, from a small child to a professional artist, because the easy-to-use command menu eliminates the need for any prior knowledge of computer operations...
- allows you to modify the system to fit your particular graphics needs, because you can change, delete, or add to existing software...
- permits you to save your creations on a diskette and later recall them for review or change, through its convenient image storage and editing features...
- protects your initial investment by providing for the expansion and future growth of your present software...
- offers a low-profile desktop package that fits easily into even the smallest workspace, because the power supply and control electronics reside within your Apple.



The Graphics Tablet—A Closer Look

The Graphics Tablet and its pen connect to the Tablet Interface Card, which plugs into one of the peripheral connector slots in your Apple computer. After installation, insert the Apple Graphics Tablet Software diskette into your Apple disk drive, turn on the power and, within seconds, you're ready to start creating.

The command boxes across the top front of the Tablet offer the 22 separate functions available, and make it possible for you to switch modes simply by pressing the Tablet's pen to the desired command box.

Suppose you want to attempt a landscape layout. Begin by pressing the DRAW command box and then the PEN COLOR command box. The color options menu will appear on your screen.

Move the pen lightly across the Tablet; an indicator will drift across your screen, signaling that the pen is in contact with the Tablet. Move the pen until the indicator rests on the color block you want; then press down on the Tablet's surface. The color menu will disappear; the blank screen is ready for your first stroke in the chosen color. Changing colors simply requires pressing the PEN COLOR command box and repeating the selection process.

As you progress with your landscape layout, you might make an error here and there. No problem. To erase, simply select the background color and draw over the mistake; then choose the appropriate color and redraw.

Maximum drawing space on the Tablet is 11 by 10 inches. If you wish to draw in a smaller area, press the VIEWPORT command box with your pen. Place dots in the diagonal corners of the desired drawing area; the Tablet will automatically draw the borders. You will then be able to draw only in the specified area.

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Suppose you want to include an intricate flower in your landscape layout, but feel uncertain about using the tiny drawing strokes it will require. The Tablet software was designed with that problem in mind. Set a VIEWPORT surrounding the area in which the flower will be drawn; then simply press the REDUCER command to shrink the entire Tablet working area into the VIEWPORT on the screen. This converts large pen motions on the Tablet into small motions on the screen, thus allowing you to draw intricate, detailed designs.

To achieve the opposite result—a large pen motion on the screen from a small motion on the Tablet—press the WINDOW command box. Select the portion of the Tablet to be enlarged, and that surface will be expanded to fill the screen.

When you have completed your landscape layout, or if you want to stop drawing for awhile, save your creation for future review or revision by pressing the SAVE command box. The picture will disappear from the screen and your Apple will ask you for the name of the drawing. Type in the name you choose, press the "return" key, and your drawing will be safely stored on a diskette.

Because the Graphics Tablet employs your Apple's problem solving capability, it does more than allow you to create drawings. Suppose you want to include a swimming pool in your landscape layout. First, draw the pool into your landscape. Then, to determine how many square feet of land you've used, convert the screen units into feet. To do this, simply press the CALIBRATE command box and wait for BEGINNING POINT? to appear. Select any point on the screen and press down on the Tablet with your pen. ENDING POINT? will then be displayed. Choose a destination point and again press down with your pen. Your Apple will automatically convert the distance between those two points into screen units and ask you to assign your value—for example, 10 screen units equals two feet. Then, using the AREA command, move the pen over the perimeter of the pool. Your Apple will convert the units into square feet automatically.

The Graphics Tablet can also be programmed to be a powerful tool for special applications. Suppose, for example, that you're conducting a telephone survey on laundry detergent. Instead of marking the responses on separate sheets and totaling them when the survey is complete, you can draw the form on your Tablet and write a program which will total the responses as you enter them with the pen. Your program could even request that the Apple break down the responses into different categories.

So, whether you're an engineer, a professional artist, an architect, illustrator, novice or programmer, the Apple Graphics Tablet offers you the opportunity to free both your imagination and your creative spirit.

System Configuration

To use the Apple Graphics Tablet, you will need the following system:

- Apple II with Applesoft Firmware Card, or Apple II Plus, with 48K of memory; or
- Apple II or Apple II Plus, with the Apple Language System;
- a composite video color monitor or television*;
- an Apple Disk II disk drive with controller.

*A black and white monitor or television may also be used if you do not require color.

Technical Specifications

Power Requirements (supplied from Apple power supply):

230mA + 5 VDC
40mA + 12 VDC
20mA - 5 VDC
40mA - 12 VDC

Software/Firmware:

Control program in Applesoft BASIC.
Quick-draw routine in Assembly Language.
Interface Firmware in ROM.

Digitizing Area:

28 cm x 28 cm (11 in x 11 in)

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Overall Size:

39.5 cm x 39.5 cm x 2.5 cm (15.5 in x 15.5 in x 1 in)

Controller Card Size:

17.8 cm x 7.0 cm x 1.3 cm (7 in x 2.75 in x .5 in)

Pen Size:

15.2 cm (6 in) with 1.8m (6 ft) cable

Data Rate:

Up to 120 coordinate pairs per second

Coordinate System:

Absolute cartesian with selectable origin and scale

Output Forms:

Eight-bit binary coordinate pairs

Interface Levels:

TTL—provided by Apple interface

Operating Modes (Selectable from Tablet Menu)

Tablet Modes:

RESET

Sets Tablet to default modes.

CLEAR

Clears Apple screen or VIEWPORT, whichever is smaller.

WINDOW

Selects active portion of Tablet surface.

BKGND COLOR

Sets entire screen to chosen color.

DELTA

Sets the number of dots to move before drawing a line.

Also turns audio feedback ON/OFF.

SOFT RESET

Clears the viewport.

VIEWPORT

Sets a sub-area of the screen as the active area.

CALIBRATE

Sets screen scale.

REDUCER

Maps the entire tablet surface into the current viewport.

Pen Modes:

PEN COLOR

Sets drawing color to one of the six Hires colors.

DRAW

Draws lines.

LINES

Draws a line between two specified points.

DOTS

Draws a single dot each time the pen is placed on the active tablet area.

FRAME

Draws an open rectangle given diagonal corners.

BOX

Draws a solid rectangle using the current pencolor, given diagonal corners.

Command Functions:

CATALOG

Displays names of files currently stored on a diskette.

SAVE

Saves the current picture to diskette.

LOAD

Loads a previously generated picture file.

SEPARATE

Removes all colors from the screen except the selected color.

SLIDE

Repositions the image on the screen using both horizontal and vertical wraparound.

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DISTANCE

Calculates the scale value of the length of a drawn line.

AREA

Calculates the scaled area of a drawn enclosed figure.

The Graphics Tablet Package Order No. A2M0029

With your Graphics Tablet order, you will receive:

- Apple Graphics Tablet with cable;
 - Pen with 6-ft. connector cable;
 - Two (2) "Graphics Tablet Software" Diskware diskettes;
 - Graphics Tablet Instruction Manual;
 - Interface;
 - Mylar overlay;
 - Warranty card.
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10260 Bandley Drive
Cupertino, California 95014
(408) 996-1010

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